

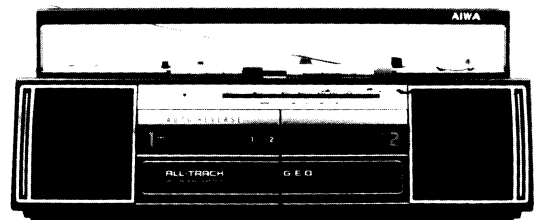
SERVICE MANUAL

MODEL NO. **CS-WX500**

■STEREO CASSETTE RECORDER

■TYPE. HS, HB, HWR, UB, CB, EB, EWR,
ZS, ZB, ZWR

■BASIC MECHANISM: TN-521



SPECIFICATIONS

Type	Stereo multiband radio cassette recorder	Radio Section	
Power source	Batteries, DC 9V (R20P × 6) CS-WX500H AC 110—120 V/220—240 V (switchable), 50—60 Hz CS-WX500U AC 120 V/220—240 V (switchable), 50—60 Hz CS-WX500C AC 120 V, 60 Hz CS-WX500E,Z AC 110—120 V/220—240 V (switchable), 50—60 Hz	Frequency ranges	CS-WX500H FM: 87.5—108 MHz MW: 530—1,605 kHz SW ₁ : 2.3—7.0 MHz SW ₂ : 7.0—22 MHz CS-WX500U,C FM: 87.5—108 MHz AM 530—1,605 kHz CS-WX500E,Z FM: 87.5—108 MHz SW: 5.9—18 MHz MW: 530—1,605 kHz LW: 150—285 kHz
Output	7.6W maximum (3.8W + 3.8W) CS-WX500U (FTC Rule) 1.7 watts per channel, Min. RMS at 2.6 ohms, from 200 Hz to 10 kHz, with no more than 10% Total Harmonic Distortion	Antennas	CS-WX500H Whip antenna for FM and SW ₂ Ferrite bar antenna for MW and SW ₁ CS-WX500U,C Whip antenna for FM Ferrite bar antenna for AM CS-WX500E,Z Whip antenna for FM and SW Ferrite bar antenna for MW and LW
Power consumption	CS-WX500H : 12W CS-WX500U : 9W CS-WX500C : 13W CS-WX500E,Z : 13 W	Dimensions (W×H×D)	492 × 151 × 152.5 (mm)
Speakers	100 mm cone type × 2	Weight	2.9 kg
Tape Recorder Section			
Specified Tapes	Playback: Normal, Chrome, Metal Record: Normal		
Frequency response	NORMAL tape: 40—12,000 Hz CrO ₂ tape: 40—14,000 Hz METAL tape: 40—16,000 Hz		

• Design and specifications are subject to change without notice.

SERVICE MANUAL

MODEL NO. **CS-WX500**

■STEREO CASSETTE RECORDER

■TYPE. HS, HB, HWR, UB, CB, EB, EWR,
ZS, ZB, ZWR

■BASIC MECHANISM: TN-521



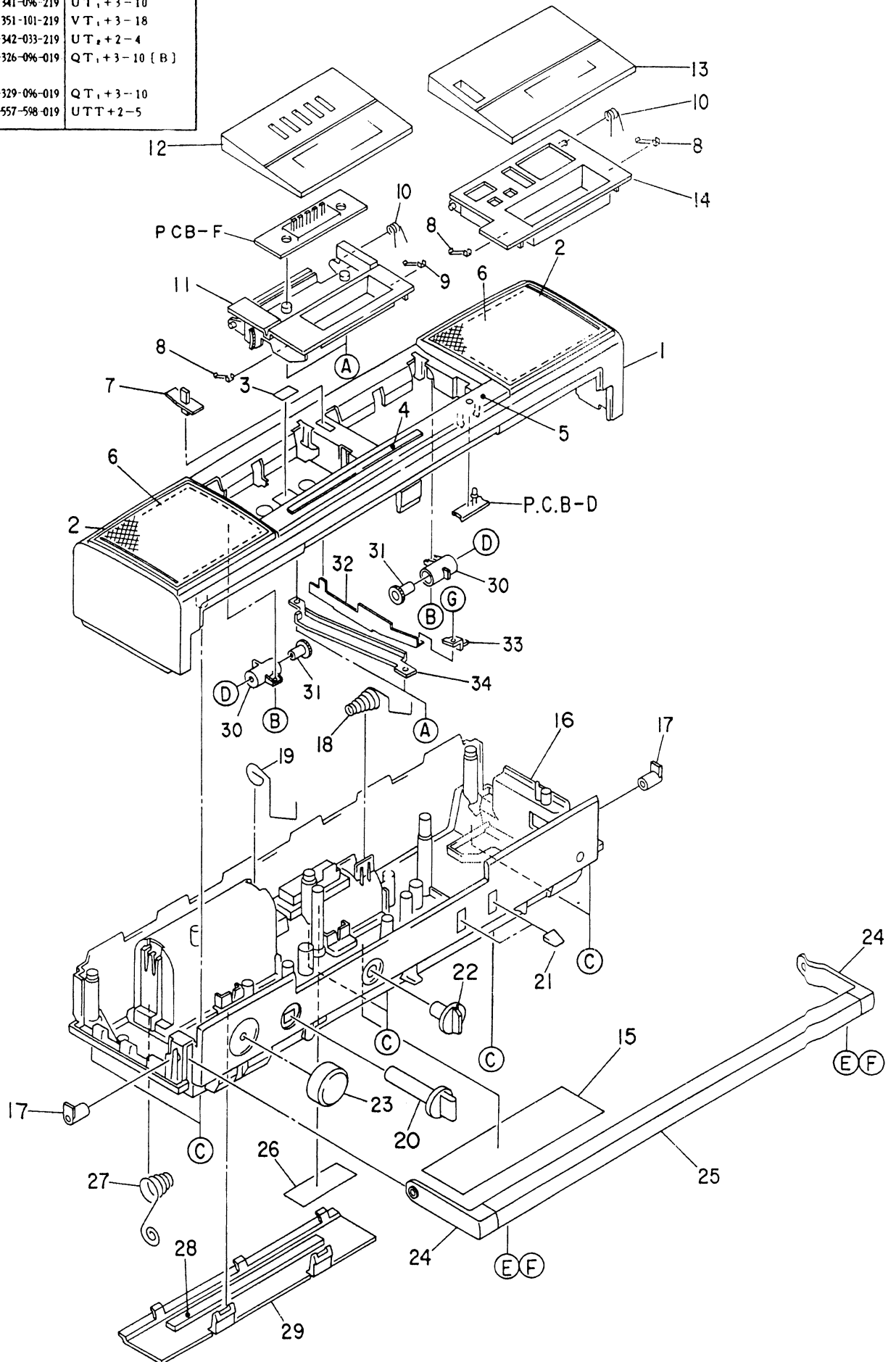
SPECIFICATIONS

Type	Stereo multiband radio cassette recorder	Radio Section	
Power source	Batteries, DC 9V (R20P × 6) CS-WX500H AC 110—120 V/220—240 V (switchable), 50—60 Hz CS-WX500U AC 120 V/220—240 V (switchable), 50—60 Hz CS-WX500C AC 120 V, 60 Hz CS-WX500E,Z AC 110—120 V/220—240 V (switchable), 50—60 Hz	Frequency ranges	CS-WX500H FM: 87.5—108 MHz MW: 530—1,605 kHz SW ₁ : 2.3—7.0 MHz SW ₂ : 7.0—22 MHz CS-WX500U,C FM: 87.5—108 MHz AM 530—1,605 kHz CS-WX500E,Z FM: 87.5—108 MHz SW: 5.9—18 MHz MW: 530—1,605 kHz LW: 150—285 kHz
Output	76W maximum (3.8W + 3.8W) CS-WX500U (FTC Rule) 1.7 watts per channel, Min. RMS at 2.6 ohms, from 200 Hz to 10 kHz, with no more than 10% Total Harmonic Distortion	Antennas	CS-WX500H Whip antenna for FM and SW ₂ Ferrite bar antenna for MW and SW ₁ CS-WX500U,C Whip antenna for FM Ferrite bar antenna for AM CS-WX500E,Z Whip antenna for FM and SW Ferrite bar antenna for MW and LW
Power consumption	CS-WX500H : 12W CS-WX500U : 9W CS-WX500C : 13W CS-WX500E,Z : 13 W	Dimensions (W×H×D)	492 × 151 × 152.5 (mm)
Speakers	100 mm cone type × 2	Weight	2.9 kg
Tape Recorder Section			
Specified Tapes	Playback: Normal, Chrome, Metal Record: Normal		
Frequency response	NORMAL tape: 40—12,000 Hz CrO ₂ tape: 40—14,000 Hz METAL tape: 40—16,000 Hz		

• Design and specifications are subject to change without notice.

EXPLODED VIEW-1

REF. NO.	PART NO.	DESCRIPTION
A	87-341-075-219	UT ₂ +2.6-10
B	87-341-096-219	UT ₁ +3-10
C	87-351-101-219	VT ₁ +3-18
D	87-342-033-219	UT ₂ +2-4
E	87-326-096-019	QT ₁ +3-10 (B)
F	87-329-096-019	QT ₁ +3-10
G	87-557-598-019	UTT+2-5



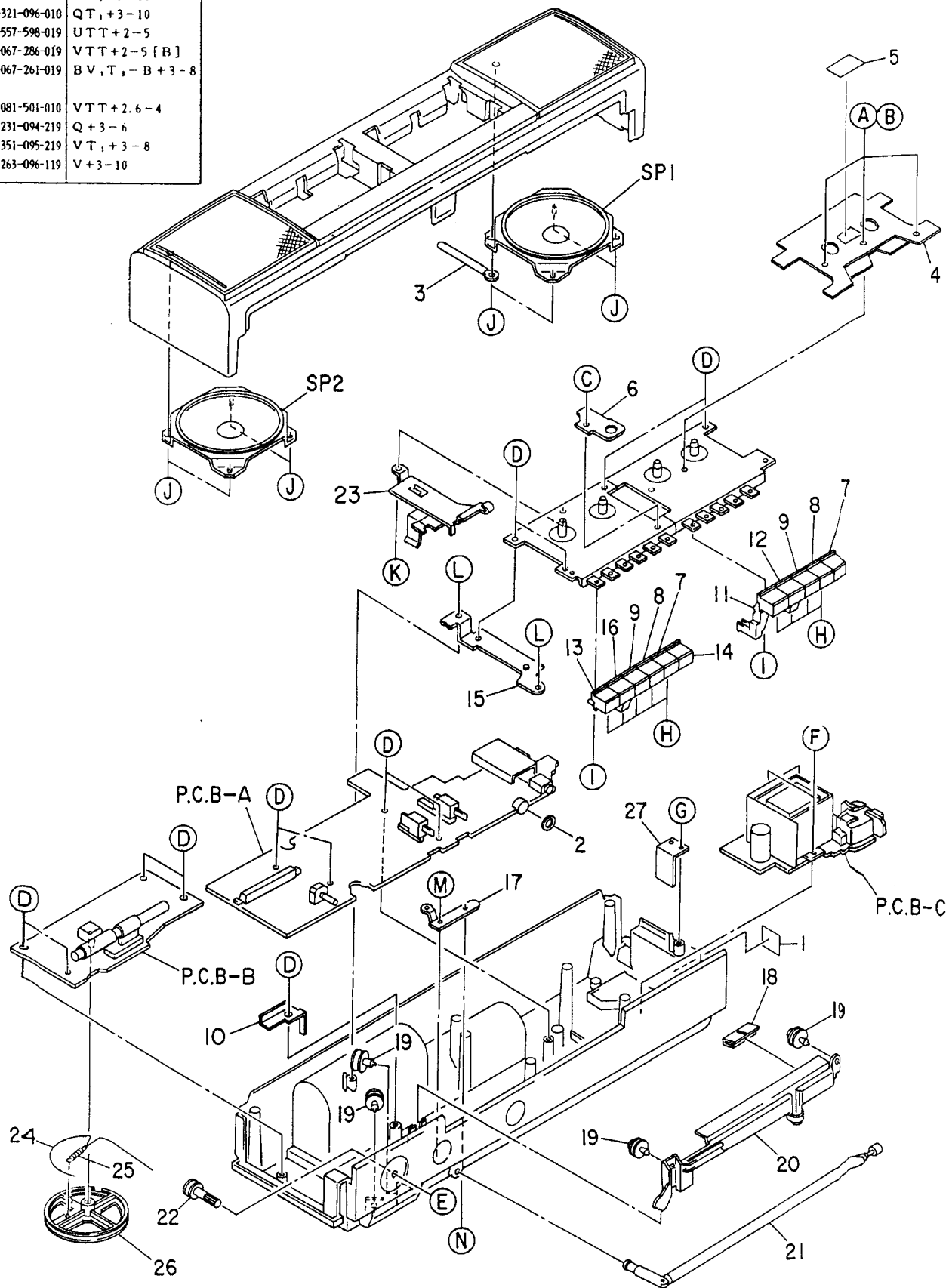
As to the disassembl instructions, refer to the service manual of
CS-W500

MECHANICAL PARTS LIST

PART NO. CHANGED TO	REF. NO.	PART NO.	ORDER	DESCRIPTION	COMMON MODEL	Q. TY
1-1		*81-571-001-019	S	CABINET, FRONT(B)	*	1
1-1		*81-571-016-019	S	CABINET, FRONT(S)	*	1
1-1		*81-571-018-019	S	CABINET, FRONT(WR)	*	1
1-2		*81-571-009-019	S	PUNCHING, SPEAKER	*	2
1-3		---		LABEL CASSETTE, COMPARTMENT		1
1-4		*81-516-008-019	S	WINDOW, TUNING	CS-J250	1
1-5		*81-571-008-019	S	PLATE, DIAL(H ONLY)	*	1
1-5		*81-571-036-019	S	PLATE, DIAL(U, C ONLY)	*	1
1-5		*81-571-028-019	S	PLATE, DIAL(E, Z ONLY)	*	1
1-6		*81-571-012-010	J	MASK, SPEAKER(EXCEPT U)	*	2
1-6		*81-571-046-019	S	MASK, SPEAKER(U ONLY)	*	2
1-7		*81-571-011-119	S	KNOB, DIRECTION	*	1
1-8		*81-533-287-010	J	P-SPRING, CASSETTE SUPPORT	CS-W50	3
1-9		*81-556-245-010	J	P-SPRING, CASSETTE HOLDER A	CS-W660	1
1-10		*81-569-598-019	S	T-SPRING, CASSETTE N	CS-W200	2
1-11		81-571-002-019	S	BOX, CASSETTE R	*	1
1-12		81-571-004-019	S	WINDOW, CASSETTE R	*	1
1-13		81-571-005-019	S	WINDOW, CASSETTE L	*	1
1-14		81-571-003-119	S	BOX, CASSETTE L	*	1
1-15		---		PLATE, SPEC		1
1-16		*81-571-020-019	S	CABINET, REAR(B) (H ONLY)	*	1
1-16		*81-571-032-019	S	CABINET, REAR(B) (U, C ONLY)	*	1
1-16		*81-571-024-019	S	CABINET, REAR(B) (E, Z ONLY)	*	1
1-16		*81-571-022-019	S	CABINET, REAR(S) (H ONLY)	*	1
1-16		*81-571-026-019	S	CABINET, REAR(S) (Z ONLY)	*	1
1-16		*81-571-023-019	S	CABINET, REAR(WR) (H ONLY)	*	1
1-16		*81-571-027-019	S	CABINET, REAR(WR) (E, Z ONLY)	*	1
1-17		*81-573-216-119	S	FASTENER HANDLE	CS-W700	2
1-18		*81-557-213-019	S	SPRING, BATTERY CONTACT-N	CS-W220	1
1-19		*81-557-212-019	S	SPRING, BATTERY CONTACT-P	CS-W220	1
1-20		81-557-029-019	S	KNOB, SELECTOR(B, WR) (EXCEPT U, C)	CS-W220	1
1-20		81-569-085-019	S	KNOB, SELECTOR A(S) (EXCEPT U, C)	CS-W200	1
1-21		81-557-038-019	S	KNOB, TOGGLE(B, WR)	CS-W220	2
1-21		81-569-028-019	S	KNOB, TOGGLE C(S)	CS-W200	2
1-22		81-557-039-010	J	KNOB, VOLUME(B, WR)	CS-W220	1
1-22		81-569-027-010	J	KNOB, VOLUME A(S)	CS-W200	1
1-23		81-546-060-019	S	KNOB, TUNING	CS-230	1
1-24		*81-569-029-010	J	ARM HANDLE	CS-W200	2
1-25		*81-569-020-019	S	GRIP HANDLE(B)	CS-W200	1
1-25		*81-569-087-019	S	GRIP HANDLE(S)	CS-W200	1
1-25		*81-569-088-019	S	GRIP HANDLE(WR)	CS-W200	1
1-26		---		PLATE, BLIND A		1
1-27		*81-504-577-119	S	C-SPRING, BATTERY CONTACT		1
1-28		*81-518-228-119	S	CUSHION M, BATTERY	CS-W330	1
1-29		81-557-045-019	S	LID, BATTERY(B)	CS-W220	1
1-29		81-571-052-019	S	LID, BATTERY(S)	*	1
1-29		81-557-061-019	S	LID, BATTERY(WR)	CS-W220	1
1-30		*81-546-211-110	J	HOLDER OIL-DAMPER ASSY	CS-230	2
1-31		81-546-210-010	J	GEAR, OIL-DAMPER	CS-230	2
1-32		*81-571-202-019	S	ARM, DIRECTION	*	1
1-33		*81-571-204-019	S	GUIDE, DIRECTION	*	1
1-34		*81-571-203-019	S	COVER, DIRECTION	*	1

EXPLODED VIEW-2

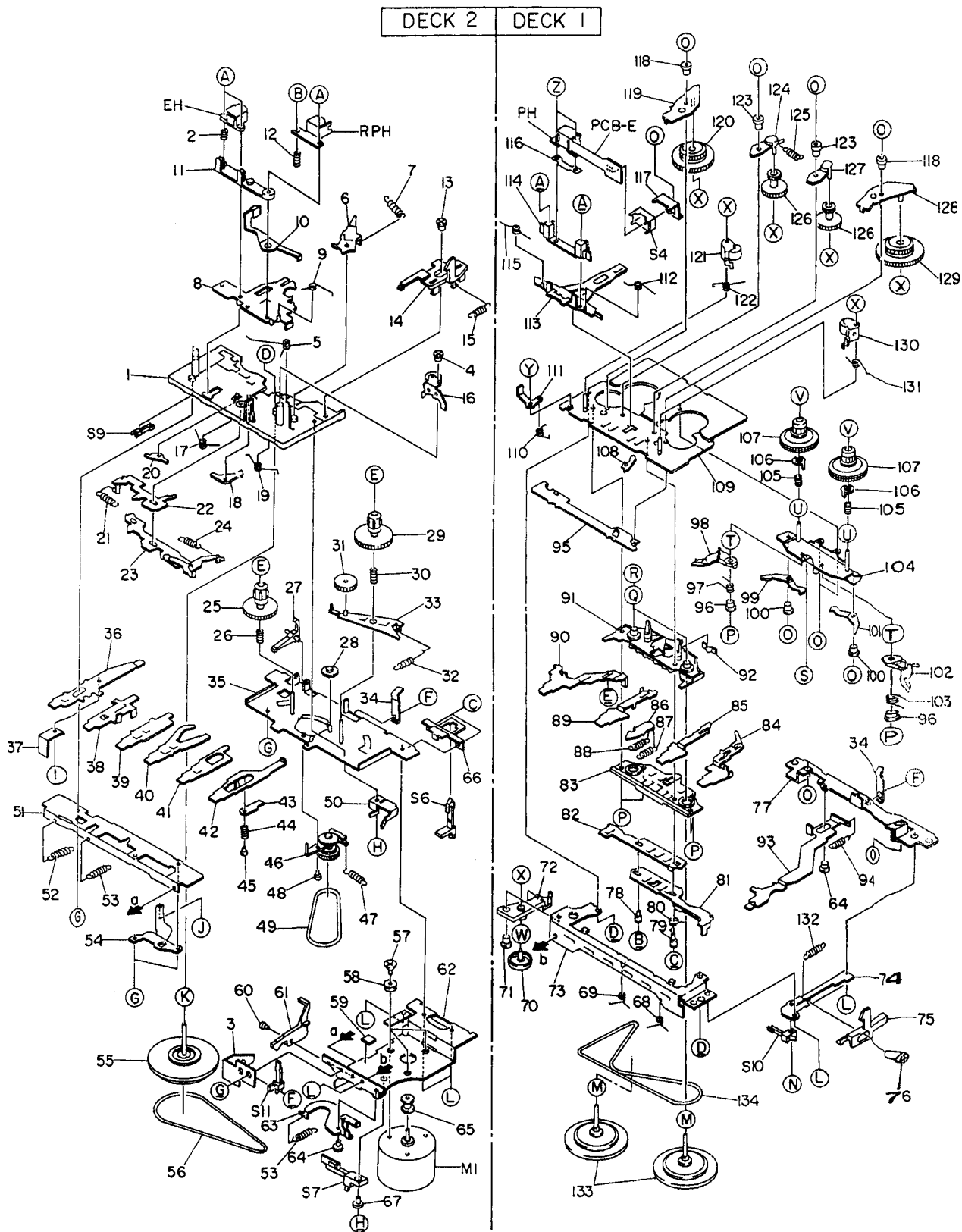
REF. NO.	PART NO.	DESCRIPTION
A	87-261-529-310	V+1.7-4 [B]
B	87-263-529-310	V+1.7-4
C	87-081-480-019	VT T+2.6-5
D	87-356-096-219	VT ₂ +3-10 [R]
E	81-534-228-010	PW5.2-10.4-0.4
F	87-346-096-219	UT ₁ +3-10
G	87-321-096-010	QT ₁ +3-10
H	81-557-598-019	UT T+2-5
I	87-067-286-019	VT T+2-5 [B]
J	87-067-261-019	BV ₁ T ₂ -B+3-8
K	87-081-501-010	VT T+2.6-4
L	87-231-094-219	Q+3-n
M	87-351-095-219	VT ₁ +3-8
N	87-263-096-119	V+3-10



PART NO. CHANGED TO	REF. NO.	PART NO.	ORDER	DESCRIPTION	COMMON MODEL	Q, TY
2-1		---		PLATE AC		1
2-2		---		G CUSHION 4-10-1		1
2-3		---		WIRE BINDER		1
2-4		*81-569-009-019	S	COVER,CASSETTE (B)	CS-W200	1
2-4		*81-571-050-019	S	COVER,CASSETTE (S)	*	1
2-4		*81-571-051-019	S	COVER,CASSETTE (WR)	*	1
2-5		---		LABEL,CASSETTE COMPARTMENT		1
2-6		*81-569-216-019	S	HOLDER M-A	CS-W200	1
2-7		*81-557-034-019	S	PUSH-KEY,STOP	CS-W220	2
2-8		*81-557-032-019	S	PUSH-KEY,REW	CS-W220	2
2-9		*81-557-031-019	S	PUSH-KEY,FF	CS-W220	2
2-10		*81-571-208-019	S	HOLDER,TU	*	1
2-11		*81-571-055-019	S	PUSH-KEY,W A	*	1
2-12		*81-569-035-019	S	PUSH-KEY,PLAY RIGHT	CS-W200	1
2-13		*81-571-054-019	S	PUSH-KEY,REC A	*	1
2-14		*81-569-081-019	S	PUSH-KEY,PAUSE N	CS-W200	1
2-15		*81-569-204-019	S	HOLDER M	CS-W200	1
2-16		*81-557-030-019	S	PUSH-KEY,PLAY	CS-W220	1
2-17		*81-557-211-019	S	TERMINAL SS ANTENNA	CS-W220	1
2-18		*81-546-122-019	S	POINTER,TUN-K	CS-230	1
2-19		*87-071-019-010	J	ROLLER,7MM DIA.		4
2-20		*81-571-201-019	S	CHASSIS,DIAL	*	1
2-21		87-043-087-019	S	ANTENNA,WHIP		1
2-22		*81-546-208-119	S	SHAFT,TUNING	CS-230	1
2-23		*81-569-202-119	S	HOLDER REC ASSY	CS-W200	1
2-24		*87-096-045-019	S	DIAL STRING 0.3MM		1
2-25		*81-556-244-019	S	E-SPRING,DIAL	CS-W660	1
2-26		*81-546-201-119	S	DRUM,DIAL100	CS-230	1
2-27		*81-569-217-019	S	HOLDER AC	CS-W200	1

EXPLODED VIEW-3

REF.NO.	PART NO.	DESCRIPTION	REF.NO.	PART NO.	DESCRIPTION	REF.NO.	PART NO.	DESCRIPTION
A	84-405-273-010	⊕ screw M 2 × 7	L	81-504-254-010	VTT + 2 × 4	W	S9-926-000-000	PW 1.55 × 3 × 0.2
B	84-405-274-010	Azimuth screw M 2 × 7	M	86-518-290-010	PW 2.1 × 3 × 0.3	X	81-504-264-010	PW 1.2 × 3 × 0.25 (CUT)
C	81-504-254-010	V + 2 × 4	N	S9-124-000-000	U + 2 × 7	Y	86-518-291-010	PW 2.1 × 5 × 0.5 (CUT)
D	S9-875-000-000	PW 1.55 × 3.8 × 0.5 (CUT)	O	87-261-523-310	V + 1.7 × 2	Z	S9-994-000-000	Special screw ⊕ M 2 × 4
E	S9-933-000-000	PW 1.2 × 3.8 × 0.4 (CUT)	P	87-261-528-310	V + 1.7 × 3.5	<u>A</u>	86-518-295-010	V + 2 × 5
F	84-405-268-010	VTT + 2 × 3	Q	86-518-289-010	PW 2 × 3.5 × 0.3	<u>B</u>	S9-766-000-000	V + 1.7 × 6
G	S9-679-000-000	UT ₁ + 2 × 5	R	86-518-287-010	PW 1.55 × 3.5 × 0.5 (CUT)	<u>C</u>	S9-977-000-000	V + 1.7 × 7
H	81-504-260-010	VTT + 2 × 6	S	87-261-525-310	Q + 1.7 × 2.5	<u>D</u>	S9-692-000-000	VT ₁ + 1.7 × 2.5
I	S9-076-000-000	VS + 2 × 3	T	86-518-293-010	PW 4.6 × 9 × 0.13	<u>E</u>	S9-743-000-000	PW 1.6 × 3.8 × 0.3 (CUT)
J	81-504-254-010	VTT + 2 × 4	U	86-518-292-010	PW 2.6 × 4.3 × 0.13	<u>F</u>	86-527-219-010	V + 1.7 × 3
K	S9-999-000-000	PW 2.05 × 4 × 0.5	V	86-518-286-010	PW 1.2 × 3 × 0.4 (CUT)	<u>G</u>	81-747-393-010	VT + 2 × 5
						<u>H</u>	81-518-333-010	VTT + 2 × 6



DECK 2

PART NO. CHANGED TO	REF. NO.	PART NO.	ORDER	DESCRIPTION	COMMON MODEL	Q, TY
	3-1	*86-527-220-010	J	MAIN BASE ASSY		1
	3-2	*86-521-246-010	J	SPRING,EH		1
	3-3	*S1-853-120-080	J	BRACKET,SWITCH		1
	3-4	*84-405-279-010	J	SCREW,MS		1
	3-5	*81-557-266-010	J	SPRING,HEAD PANEL	CS-W220	1
	3-6	*81-557-260-010	J	LEVER,AUTO	CS-W220	1
	3-7	*86-521-238-010	J	SPRING,AUTO LEVER		1
	3-8	*S1-829-034-400	J	PANEL,HEAD		1
	3-9	*S1-821-040-140	J	SPRING,PINCH ROLLER		1
	3-10	*S1-821-033-010	J	DETECTION PLATE ASSY		1
	3-11	*84-405-243-010	J	BASE,HEAD		1
	3-12	*86-521-245-010	J	SPRING,AZIMUTH		1
	3-13	*86-521-270-010	J	SCREW,PME		1
	3-14	*84-405-266-010	J	LEVER,E SLIDE		1
	3-15	*86-521-269-010	J	SPRING,E SLIDE LEVER		1
	3-16	S1-821-043-020	J	PINCH ROLLER ARM ASSY		1
	3-17	*86-527-209-010	J	SPRING,BUTTON LEVER B		1
	3-18	*81-557-257-010	J	LEVER,REW	CS-W220	1
	3-19	*86-521-232-010	J	SPRING,BUTTON LEVER C		1
	3-20	*86-521-234-010	J	STOPPER,PR		1
	3-21	*84-405-247-010	J	SPRING,SWITCH ACTUATING PLATE		1
	3-22	*86-521-220-010	J	BUTTON,SWITCH ACTUATING		1
	3-23	*S1-821-015-070	J	PUSH-BUTTON ACTUATING PLATE ASSY		1
	3-24	*86-521-236-010	J	SPRING,ACTUATING PLATE		1
	3-25	81-557-277-010	J	S REEL ASSY	CS-W220	1
	3-26	*S1-821-106-400	J	SPRING,BACK TENSION	CS-W220	1
	3-27	*S1-821-106-900	J	SAFTY LEVER,REC		1
	3-28	*S1-821-107-000	J	GEAR,FF		1
	3-29	S1-821-103-330	J	TAKE-UP REEL ASSY		1
	3-30	*81-557-279-010	J	SPRING,BACK TENSION	CS-W220	1
	3-31	*S1-821-103-4A0	J	GEAR,T.ROLLER		1
	3-32	*86-521-256-010	J	SPRING,TG PLATE		1
	3-33	*S1-821-105-320	J	T.GEAR PLATE ASSY		1
	3-34	*S1-821-100-930	J	SPRING PLATE,RACK BEARKING		2
	3-35	*S1-821-105-310	J	REEL BASE ASSY		1
	3-36	*81-557-251-010	J	LEVER,REC BUTTON	CS-W220	1
	3-37	*86-527-210-010	J	SPRING PLATE, REC		1
	3-38	*S1-821-014-2B0	J	LEVER,PLAY BUTTON		1
	3-39	*86-527-206-010	J	LEVER,REW BUTTON		1
	3-40	*86-527-207-010	J	LEVER,FF BUTTON		1
	3-41	*81-557-255-010	J	LEVER,STOP BUTTON	CS-W220	1
	3-42	*81-557-256-010	J	PAUSE BUTTON LEVER ASSY	CS-W220	1
	3-43	*81-557-258-010	J	LEVER,PAUSE	CS-W220	1
	3-44	*86-521-230-010	J	SPRING,PAUSE LEVER		1
	3-45	*86-521-231-010	J	STOPPER P		1
	3-46	S1-821-073-350	J	RF PULLEY ARM ASSY		1
	3-47	*84-405-253-010	J	SPRING,RF PULLEY ARM		1
	3-48	*81-557-270-010	J	COLLAR SCREW,RF PULLEY ARM	CS-W220	1
	3-49	84-405-254-010	J	BELT,RF		1
	3-50	*S1-821-123-400	J	PAUSE PROTECTION B.K.T.		1
	3-51	*S1-821-011-900	J	CHASSIS,SUB		1
	3-52	*86-521-235-010	J	SPRING,BUTTON LEVER A		1
	3-53	*81-557-262-010	J	SPRING,PLAY BUTTON LEVER S	CS-W220	2
	3-54	*S1-821-391-900	J	GUIDE,METAL		1
	3-55	*S1-821-093-050	J	FLYWHEEL ASSY		1
	3-56	S1-668-080-1C0	J	BELT,MAIN		1
	3-57	*86-521-264-010	J	M COLLAR SCREW		3
	3-58	*S1-821-126-600	J	RUBBER,MOTOR		3
	3-59	---		ANTI-VIBRATION FELT MAT		1
	3-60	*81-557-289-010	J	PK COLLAR SCREW B	CS-W220	1
	3-61	*81-557-286-010	J	LEVER B, P KICK	CS-W220	1
	3-62	*S1-853-120-100	J	M BRACKET		1
	3-63	*S1-853-120-200	J	LEVER,P KICK		1
	3-64	*81-557-288-010	J	PK COLLAR SCREW A	CS-W220	2
	3-65	*S1-853-120-300	J	M PULLEY		1
	3-66	*S1-853-010-030	J	BRACKET,SWITCH		1
	3-67	*S1-853-120-060	J	COLLAR,SWITCH		1

Note When placing an order for service parts, always enter the parts code number up to the last numeral on the service parts ordering sheet.

DECK 1

PART NO. CHANGED TO	REF. NO.	PART NO.	ORDER	DESCRIPTION	COMMON MODEL	Q, TY
3-68		*S1-853-020-200	J	SPRING,BUTTON LEVER		1
3-69		*S1-853-021-300	J	SPRING,BUTTON LEVER		1
3-70		S1-853-315-010	J	CENTER PULLEY ASSY		1
3-71		*81-557-289-010	J	PK COLLAR SCREW B	CS-W220	1
3-72		*S1-853-315-020	J	CENTER SHAFT BEARING BASE ASSY		1
3-73		*S1-853-310-010	J	BUTTON FRAME		1
3-74		*S1-853-130-100	J	E BRACKET		1
3-75		*S1-853-130-200	J	LEVER,E SLIDE		1
3-76		*81-557-288-010	J	PK COLLAR SCREW A	CS-W220	1
3-77		*S1-853-310-200	J	PLATE,SUB		1
3-78		*S1-853-021-200	J	COLLAR,ACTUATING PLATE		1
3-79		*S1-853-021-100	J	SPRING,ACTUATING PLATE COLLAR		1
3-80		*86-518-223-010	J	COLLAR,ACTUATING PLATE SPRING		1
3-81		*S1-853-023-010	J	SWITCH ACTUATING PLATE ASSY		1
3-82		*S1-853-020-200	J	PLATE,LOCK ACTUATING A		1
3-83		*S1-853-023-030	J	HOLD PLATE ASSY		1
3-84		*S1-853-020-700	J	LEVER,STOP BUTTON		1
3-85		*S1-853-020-500	J	LEVER,FF BUTTON F		1
3-86		*S1-853-020-400	J	PLATE,HP		1
3-87		*S1-853-021-400	J	SPRING,RC		1
3-88		*S1-853-120-400	J	SPRING,HP		1
3-89		*S1-853-020-600	J	LEVER,FF BUTTON R		1
3-90		*S1-853-020-800	J	LEVER,PLAY BUTTON		1
3-91		*S1-852-021-800	J	BUTTON BASE ASSY		1
3-92		*86-518-224-010	J	FF CONTROL ARM		1
3-93		*S1-853-310-700	J	LEVER,DUBBING		1
3-94		*S1-560-020-010	J	SPRING,SAFTY LEVER		1
3-95		*86-518-227-010	J	PLATE,SLIDE		1
3-96		*86-518-261-010	J	COLLAR,AUTO LEVER		2
3-97		*86-518-263-010	J	SPRING,AUTO LEVER R		1
3-98		*86-518-262-010	J	AUTO LEVER R		1
3-99		*86-518-265-010	J	AUTO CONTROL ARM R		1
3-100		*86-518-266-010	J	COLLAR,AUTO CONTROL		2
3-101		*86-518-264-010	J	AUTO CONTROL ARM(F)		1
3-102		*86-518-259-010	J	LEVER,AUTO(F)		1
3-103		*86-518-260-010	J	SPRING,AUTO LEVER(F)		1
3-104		*86-518-256-010	J	REEL PLATE ASSY		1
3-105		*86-518-258-010	J	BT SP A		2
3-106		*86-518-257-010	J	DELECTION PLATE A		2
3-107		86-518-255-010	J	REEL ASSY		2
3-108		*86-518-219-010	J	RC ARM		1
3-109		*S1-853-013-020	J	CHASSIS ASSY		1
3-110		*86-518-229-010	J	SPRING,REVERSE		1
3-111		*S1-853-030-100	J	REVERSE ARM A		1
3-112		*S1-853-040-100	J	SPRING,PINCH ROLLAR(F)		1
3-113		*86-518-231-010	J	PANEL,HEAD		1
3-114		*86-518-232-010	J	GUIDE,TAPE		1
3-115		*S1-853-040-200	J	SPRING,PINCH ROLLER R		1
3-116		*86-518-233-010	J	SPRING PLATE,HEAD		1
3-117		*S1-852-160-100	J	BRACKET,SWITCH		1
3-118		*86-518-241-010	J	COLLAR,T.ARM		2
3-119		*86-518-242-010	J	T.GEAR ARM R ASSY		1
3-120		*86-518-244-010	J	T.CAM GEAR		1
3-121		86-518-253-010	J	PINCH ROLLER ARM R ASSY		1
3-122		*86-518-243-010	J	SPRING,T.GEAR ARM		1
3-123		*86-518-249-010	J	COLLAR ARM		2
3-124		*86-518-250-010	J	FF GEAR ARM R ASSY		1
3-125		*86-518-248-010	J	SPRING,FF GEAR ARM		1
3-126		*86-518-247-010	J	GEAR,FF		2
3-127		*86-518-246-010	J	FF GEAR ARM F ASSY		1
3-128		*86-518-238-010	J	T.GEAR ARM F ASSY		1
3-129		*86-518-239-010	J	T.CAM GEAR F		1
3-130		86-518-252-010	J	PINCH ROLLER ARM F ASSY		1
3-131		*86-518-240-010	J	SPRING,T.GEAR ARM		1
3-132		*S0-414-050-200	J	SPRING,HEAD PANEL		1
3-133		S1-853-095-010	J	FLYWHEEL ASSY		2
3-134		S1-821-121-240	J	BELT		1

Note When placing an order for service parts, always enter the parts code number up to the last numeral on the service parts ordering sheet.

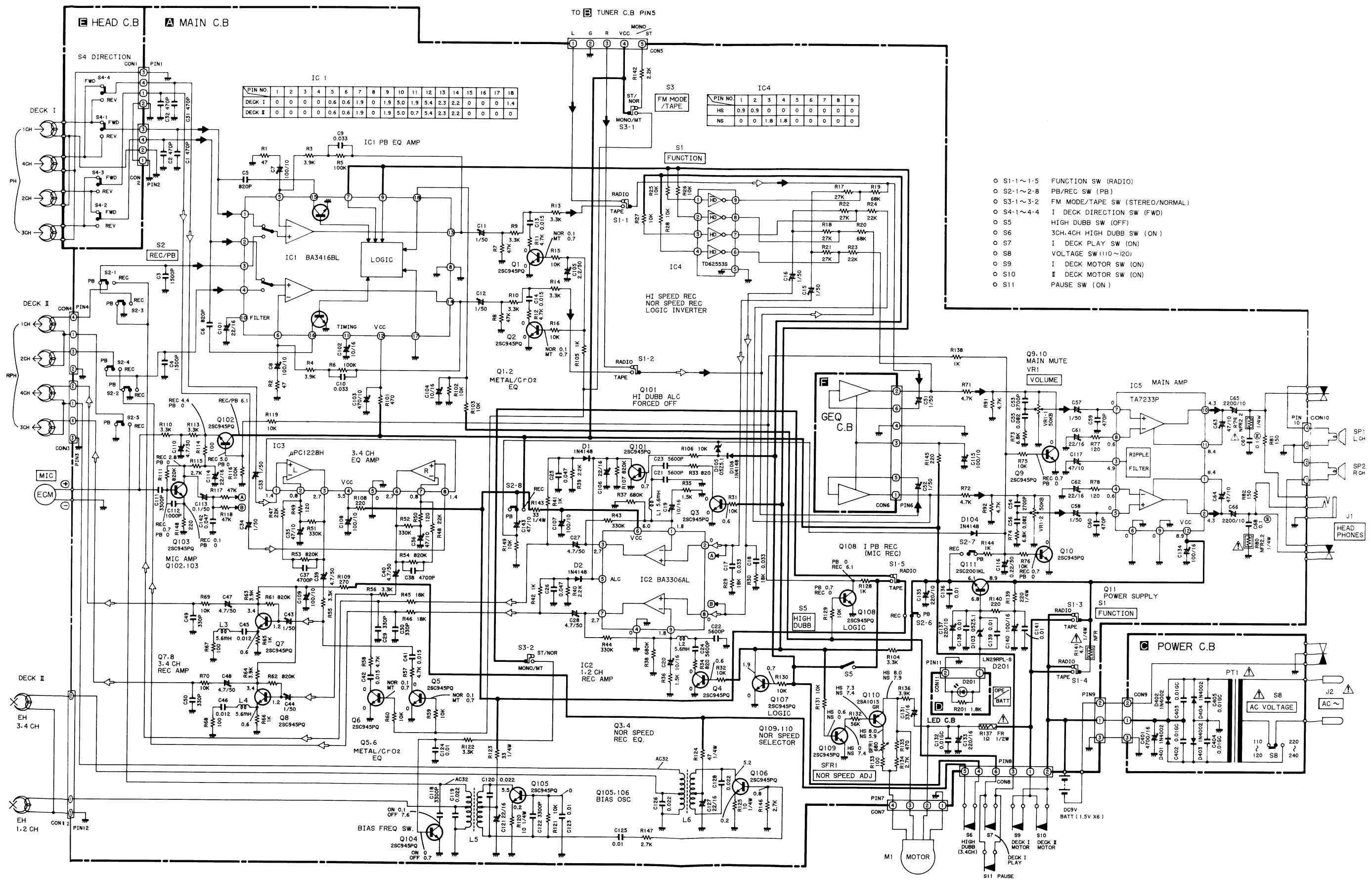
ELECTRICAL MAIN PARTS LIST

REF.NO.	PART NO.	ORDER	DESCRIPTION	REF.NO.	PART NO.	ORDER	DESCRIPTION	REF.NO.	PART NO.	ORDER	DESCRIPTION	REF.NO.	PART NO.	ORDER	DESCRIPTION	
=== IC ===				C103	*87-010-221-019	S	CAP,ELECT 470-10V	C6	*87-018-134-019	S	CAP,CERA-SOL SS 0.01	L7	*87-007-154-019	S	COIL OSC MW PS(E,Z)	
	87-020-723-019	S	IC,BA3306	C104	*87-010-378-019	S	CAP,ELECT 10-16V	C7	*87-018-134-019	S	CAP,CERA-SOL SS 0.01	L7	*87-007-155-019	S	COIL OSC SW1 PS(H)	
	87-020-828-019	S	IC,BA3416BL	C105	*87-010-402-019	S	CAP,ELECT 2.2-50V	C8	*87-018-134-019	S	CAP,CERA-SOL SS 0.01	L8	*87-007-154-019	S	COIL OSC MW PS(H)	
	87-020-461-019	S	IC,BA4234 L	C106	*87-010-379-019	S	CAP,ELECT 22-16V SME	C9	*87-018-162-019	S	CAP,CERA-SOL SS 15P RH	L8	*87-007-187-019	S	COIL OSC LW ZX PS(E,Z)	
	87-020-557-019	S	IC,TA7233P					C10	*87-018-150-019	S	CAP,CERA-SOL SS 18PF CH(H)	L9	*87-003-105-019	S	COIL 0.22UH(E,Z)	
	87-020-446-019	S	IC,TA7343AP	C107	*87-010-263-019	S	CAP,ELECT 100-10V	C10	*87-018-151-019	S	CAP,CERA-SOL SS 20P CH(E,Z)	L9	*87-003-158-019	S	COIL 0.33UH(H)	
	87-020-356-019	S	IC,TA7358P	C108	*87-010-263-019	S	CAP,ELECT 100-10V	C11	*87-018-141-019	S	CAP,CERA-SOL SS 3.3P CH	L10	*87-005-165-019	S	COIL 1UH	
	87-020-002-019	S	IC,TD62553S	C109	*87-010-263-019	S	CAP,ELECT 100-10V	C12	*87-018-134-019	S	CAP,CERA-SOL SS 0.01	MF1	*87-008-310-019	S	FILTER CFM2-468B	
	87-027-910-019	S	IC,UPC1228H	C110	*87-010-404-019	S	CAP,ELECT 4.7-50V SME									
=== TRANSISTOR ===				C112	*87-018-044-019	S	CAP,CERA-SOL 1000PF 50V	C13	*87-018-106-019	S	CAP,CERA-SOL SS 15PF SL	△R30	*87-025-313-010	J	RES,NFR 1/4W 4	
	89-110-155-019	S	TRANSISTOR,2SA1015GR	C114	*87-010-379-019	S	CAP,ELECT 22-16V SME	C14	*87-018-133-019	S	CAP,CERA-SOL SS 4700PF	S1	*81-546-621-019	S	ROTARY SW(BAND)	
	89-309-455-019	S	TRANSISTOR,2SC 945PQ	C115	*87-010-263-019	S	CAP,ELECT 100-10V	C15	*87-018-134-019	S	CAP,CERA-SOL SS 0.01	SFR1	*87-021-741-019	S	SFR 4.7K	
	89-319-233-019	S	TRANSISTOR,2SC19230	C117	*87-010-374-019	S	CAP,ELECT 47-10V	C16	*87-012-105-019	S	CAP,CERA-SOL 0.022 16V	TC1	*87-011-199-019	S	PVC 335-20P	
	89-320-011-019	S	TRANSISTOR,2SC2001K					C17	*87-012-105-019	S	CAP,CERA-SOL 0.022 16V	TC2	*	+++	S	PVC 335-20P
=== MAIN CIRCUIT BOARD SECTION ===				C118	*87-018-137-019	S	CAP,CERA-SOL S 3300PF	C18	*87-018-134-019	S	CAP,CERA-SOL SS 0.01	TC3	*	+++	S	PVC 335-20P
PCB-A	*	*	S	C121	*87-010-379-019	S	CAP,ELECT 22-16V SME	C22	*87-018-134-019	S	CAP,CERA-SOL SS 0.01	TC4	*	+++	S	PVC 335-20P
C1	*87-018-040-019	S	CAP,CERA-SOL K 470PF 50V	C123	*87-018-047-019	S	CAP,CERA-SOL 0.01UF 16V	C23	*87-018-119-019	S	CAP,CERA-SOL SS 100P	VC1	*87-011-199-019	S	PVC 335-20P	
C2	*87-018-040-019	S	CAP,CERA-SOL K 470PF 50V	C124	*87-018-047-019	S	CAP,CERA-SOL 0.01UF 16V									
C3	*87-018-136-019	S	CAP,CERA-SOL S 1500P	C125	*87-018-047-019	S	CAP,CERA-SOL 0.01UF 16V	C29	*87-014-057-019	S	CAP,PP 1000P	VC2	*	+++	S	PVC 335-20P
				C127	*87-010-379-019	S	CAP,ELECT 22-16V SME	C37	*87-018-103-019	S	CAP,CERA-SOL SS 8.2P(H)	VC3	*	+++	S	PVC 335-20P
C4	*87-018-136-019	S	CAP,CERA-SOL S 1500P	C131	*87-010-265-019	S	CAP,ELECT 33-16V	C37	*87-018-106-019	S	CAP,CERA-SOL SS 15P(E,Z)	VC4	*	+++	S	PVC 335-20P
C5	*87-018-043-019	S	CAP,CERA-SOL 820PF 50V	C132	*87-018-047-019	S	CAP,CERA-SOL 0.01UF 16V	C38	*87-018-103-019	S	CAP,CERA-SOL SS 8.2P(H)	TC5	*87-011-155-019	S	TRIMMER,CERAMIC 10P(H)	
C6	*87-018-043-019	S	CAP,CERA-SOL 820PF 50V	C133	*87-010-101-019	S	CAP,ELECT 220-16V									
C7	*87-010-263-019	S	CAP,ELECT 100-10V	C134	*87-010-112-019	S	CAP,ELECT 100-16V	C38	*87-018-114-019	S	CAP,CERA-SOL SS 39P(E,Z)	TC5	*87-011-164-019	S	TRIMMER,CERAMIC 30P(E,Z)	
				C135	*87-010-248-019	S	CAP,ELECT 220-10V	C39	*87-018-131-019	S	CAP,CERA-SOL SS 1000P(E,Z)	TC6	*87-011-154-019	S	TRIMMER,CERAMIC 6P	
C8	*87-010-263-019	S	CAP,ELECT 100-10V	C136	*87-018-047-019	S	CAP,CERA-SOL 0.01UF 16V	C40	*87-012-105-019	S	CAP,CERA-SOL 0.022 16V	TC7	*87-011-154-019	S	TRIMMER,CERAMIC 6P(H)	
C11	*87-010-401-019	S	CAP,ELECT 1-50V					C41	*87-018-134-019	S	CAP,CERA-SOL SS 0.01(E,Z)	TC7	*87-011-155-019	S	TRIMMER,CERAMIC 10P(E,Z)	
C12	*87-010-401-019	S	CAP,ELECT 1-50V	C137	*87-010-248-019	S	CAP,ELECT 220-10V	C42	*87-018-174-019	S	CAP,CERA-SOL SS 18P UJ(H)	TC8	*87-011-155-019	S	TRIMMER,CERAMIC 10P(H)	
C15	*87-010-401-019	S	CAP,ELECT 1-50V	C138	*87-018-047-019	S	CAP,CERA-SOL 0.01UF 16V	C42	*87-018-176-019	S	CAP,CERA-SOL SS 22P UJ(E,Z)	TC8	*87-011-164-019	S	TRIMMER,CERAMIC 30P(E,Z)	
				C139	*87-018-047-019	S	CAP,CERA-SOL 0.01UF 16V	C43	*87-018-174-019	S	CAP,CERA-SOL SS 18P UJ(E,Z)					
C16	*87-010-401-019	S	CAP,ELECT 1-50V	C140	*87-010-112-019	S	CAP,ELECT 100-16V	C43	*87-018-172-019	S	CAP,CERA-SOL SS 12P UJ(H)					
C19	*87-010-378-019	S	CAP,ELECT 10-16V													
C20	*87-010-378-019	S	CAP,ELECT 10-16V	C141	*87-018-047-019	S	CAP,CERA-SOL 0.01UF 16V	C44	*87-014-045-019	S	CAP,PP 330P(E,Z)	PCB-C	*	*	S	POWER CIRCUIT BOARD
C27	*87-010-404-019	S	CAP,ELECT 4.7-50V SME	C143	*87-010-374-019	S	CAP,ELECT 47-10V	C44	*87-014-061-019	S	CAP,PP 1500P(H)	C401	*87-010-124-010	J	CAP,ELECT 4700-16V	
				D1	82-135-799-019	S	DIODE IN4148	C45	*87-014-045-019	S	CAP,PP 330P(H)	C402	*87-018-047-019	S	CAP,CERA-SOL 0.01UF 16V	
C28	*87-010-404-019	S	CAP,ELECT 4.7-50V SME	D2	82-135-799-019	S	DIODE IN4148	C46	*87-018-173-019	S	CAP,CERA-SOL SS 15P UJ(H)	C403	*87-018-047-019	S	CAP,CERA-SOL 0.01UF 16V	
C29	*87-018-038-019	S	CAP,CERA-SOL K 330PF 50V													
C30	*87-018-038-019	S	CAP,CERA-SOL K 330PF 50V	D103	87-027-225-019	S	DIODE,ZENER 05Z5.1X	C46	*87-018-174-019	S	CAP,CERA-SOL SS 18P UJ(E,Z)	C404	*87-018-047-019	S	CAP,CERA-SOL 0.01UF 16V	
C31	*87-018-040-019	S	CAP,CERA-SOL K 470PF 50V	D104	82-135-799-019	S	DIODE IN4148	C47	*87-018-179-019	S	CAP,CERA-SOL SS 30P UJ(E,Z)	C405	*87-018-047-019	S	CAP,CERA-SOL 0.01UF 16V	
				D105	87-027-225-019	S	DIODE,ZENER 05Z5.1X	C48	*87-012-105-019	S	CAP,CERA-SOL 0.022 16V	D401	82-596-799-019	S	DIODE IN4002	
C32	*87-018-040-019	S	CAP,CERA-SOL K 470PF 50V	D106	82-135-799-019	S	DIODE IN4148	C49	*87-012-105-019	S	CAP,CERA-SOL 0.022 16V	D402	82-596-799-019	S	DIODE IN4002	
C33	*87-010-401-019	S	CAP,ELECT 1-50V					C51	*87-010-371-019	S	CAP,ELECT 470-6.3V	D403	82-596-799-019	S	DIODE IN4002	
C34	*87-010-401-019	S	CAP,ELECT 1-50V	J1	87-049-333-019	S	JACK 3.5MM ST(HEADPHONES)	C52	*87-010-371-019	S	CAP,ELECT 470-6.3V	D404	82-596-799-019	S	DIODE IN4002	
C35	*87-010-374-019	S	CAP,ELECT 47-10V	L1	*87-003-170-019	S	INDUCTOR 5.6MMH	C53	*87-018-134-019	S	CAP,CERA-SOL SS 0.01	△J2	87-049-783-019	S	JACK AC D(AC ~)(H)	
				L2	*87-003-170-019	S	INDUCTOR 5.6MMH	C54	*87-018-107-019	S	CAP,CERA-SOL SS 18PF	△J2	87-049-784-019	S	JACK AC E(AC ~)(E,Z)	
C36	*87-010-374-019	S	CAP,ELECT 47-10V	L3	*87-003-170-019	S	INDUCTOR 5.6MMH									
C39	*87-010-404-019	S	CAP,ELECT 4.7-50V SME	L4	*87-003-170-019	S	INDUCTOR 5.6MMH	C55	*87-018-107-019	S	CAP,CERA-SOL SS 18PF(E,Z)	△PT1	81-571-624-019	S	POWER TRANSFORMER H(H)	
C40	*87-010-404-019	S	CAP,ELECT 4.7-50V SME	L5	*81-571-620-019	S	COIL OSC	C55	*87-0							

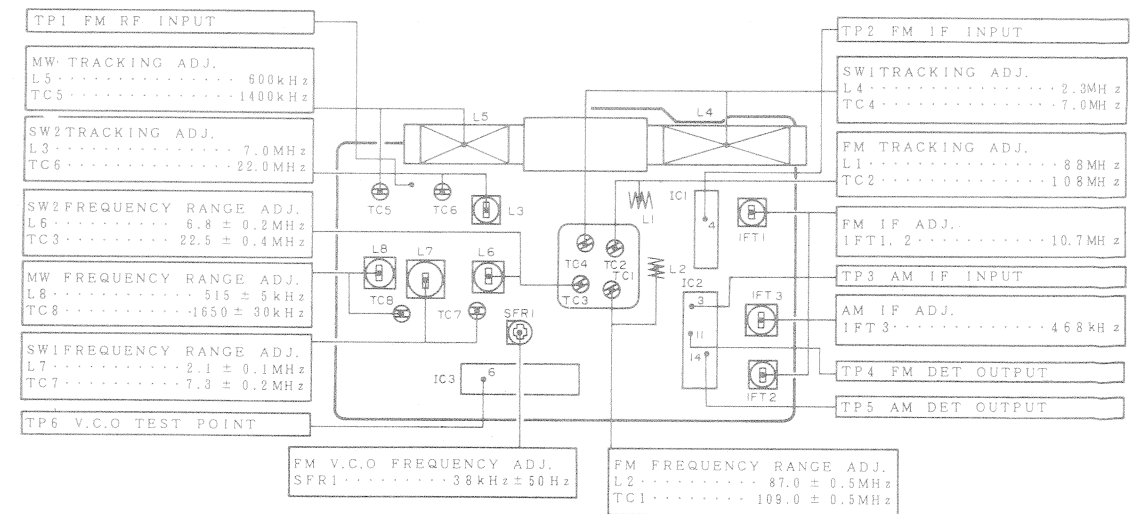
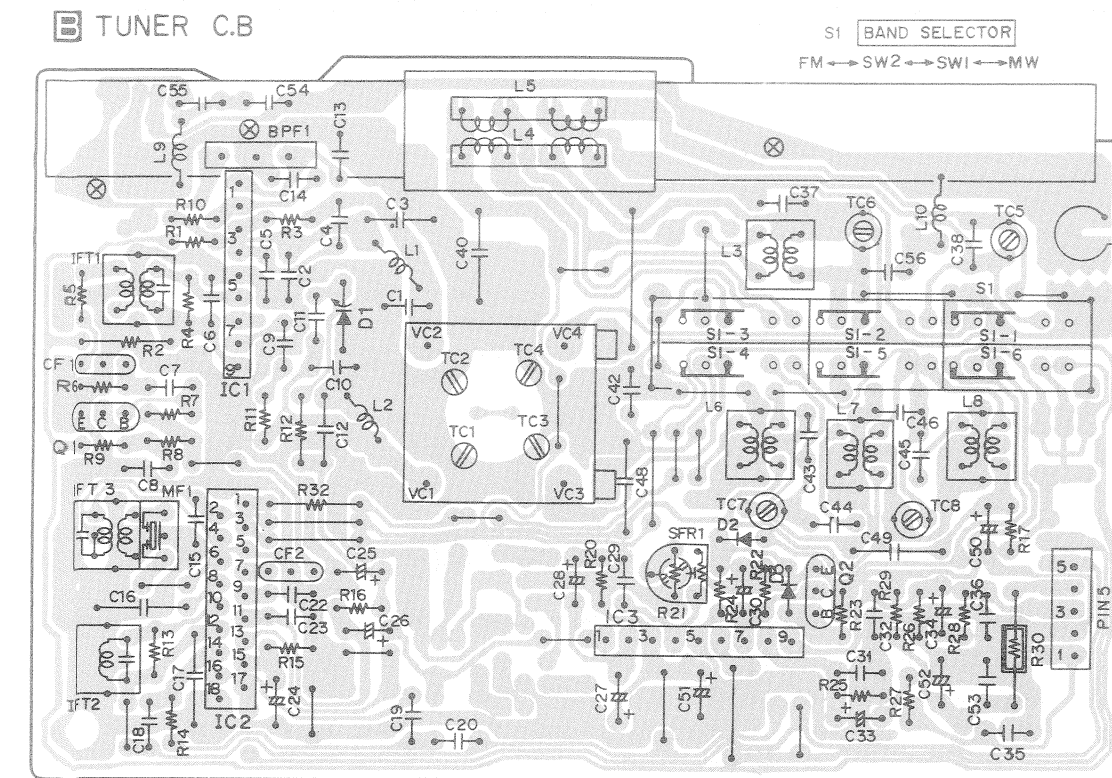
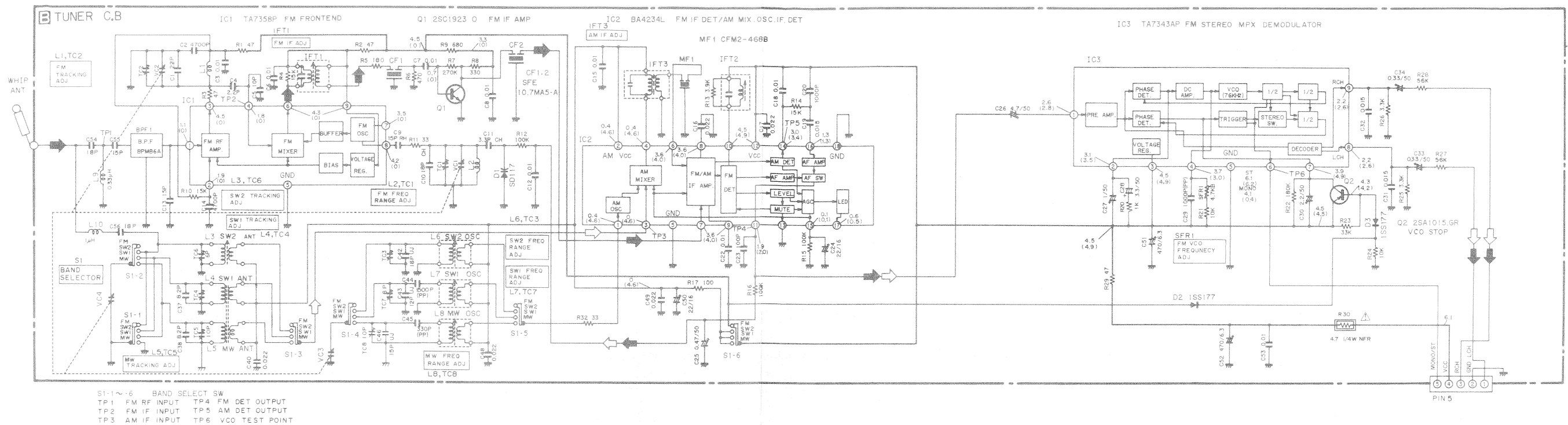
Continued on page 6/6

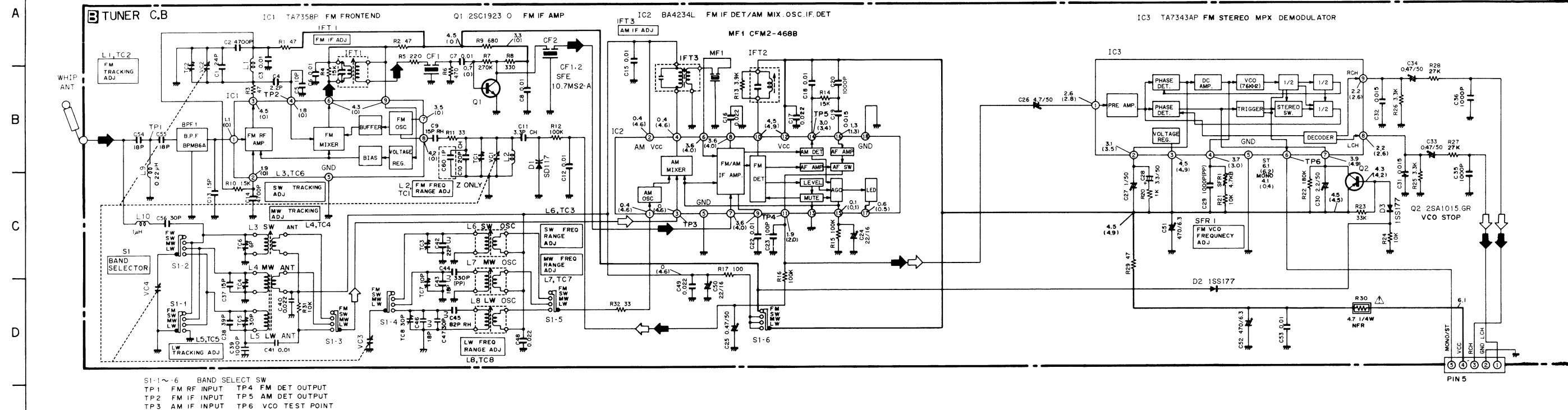
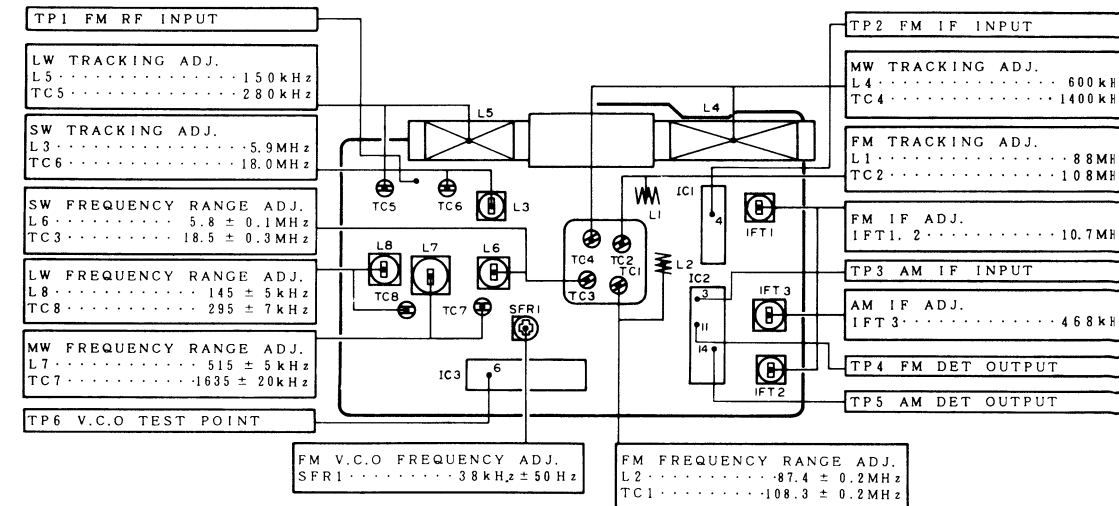
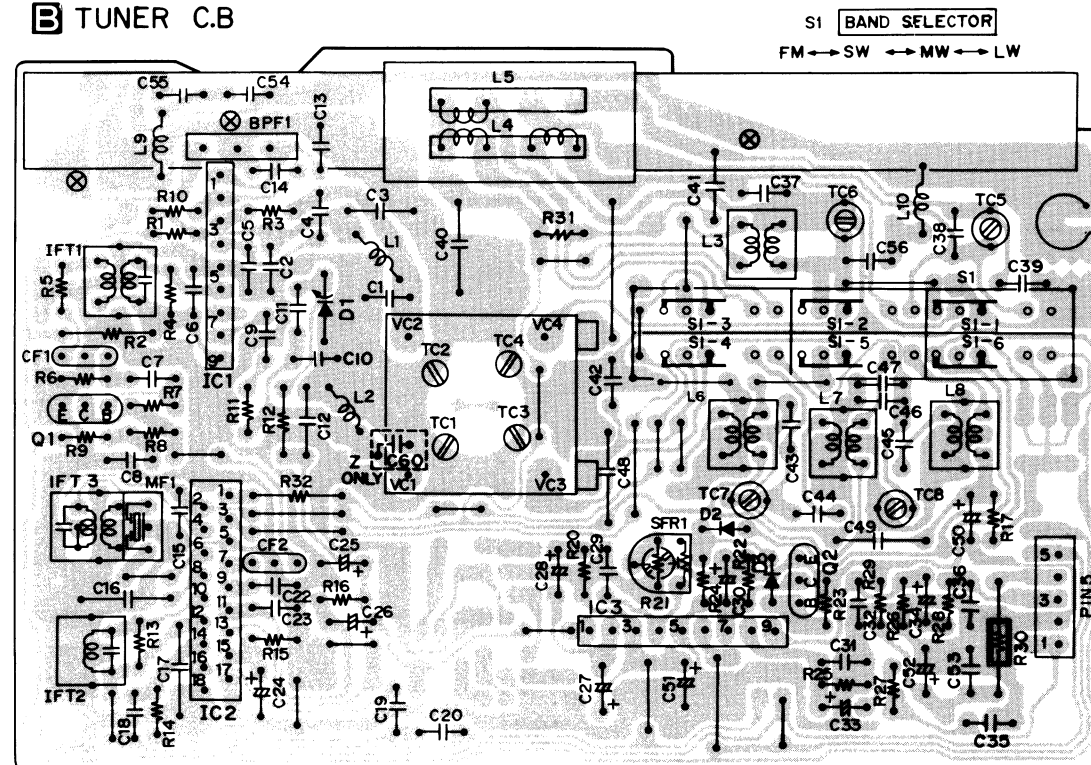
Note When placing an order for service parts, always enter the parts code number up to the last numeral on the service parts ordering sheet.

SCHEMATIC DIAGRAM-1



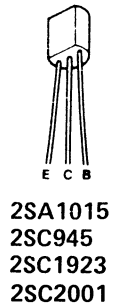




**TUNER C.B.**

Continued from page 1/6

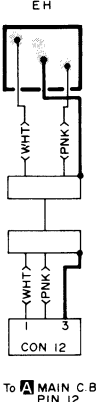
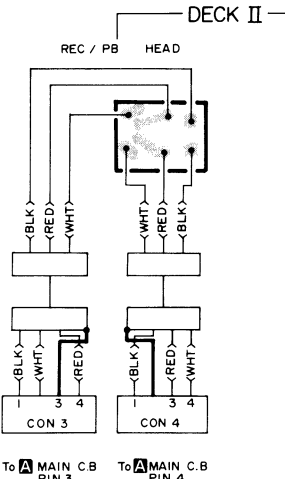
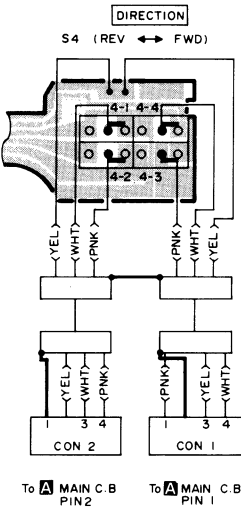
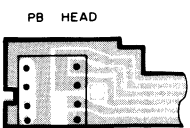
REF.NO.	PART NO.	ORDER	DESCRIPTION
PH	87-046-294-019	S	HEAD PH ASSY
PH	87-046-303-019	S	HEAD PH
RPH	87-046-295-019	S	HEAD HAGSK44018
S6	S6-401-011-330	J	LEAF SW(HI DUB 3,4CH)
S7	S6-401-010-470	J	LEAF SW(D1 PLAY)
S9	S6-401-011-430	J	LEAF SW(D1 MOTOR)
S10	S6-401-011-340	J	LEAF SW(D2 MOTOR)
S11	S6-417-010-110	J	LEAF SW(PAUSE)
SP1	★81-571-621-019	S	SPEAKER W
SP2	★81-571-621-019	S	SPEAKER W



Combination circuit board A 81-571-601-019

PCB-A	81-571-602-019
PCB-C	81-571-603-019
PCB-D	81-571-604-019

HEAD C.B (DECK I)



ADJUSTMENT

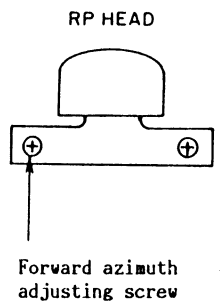
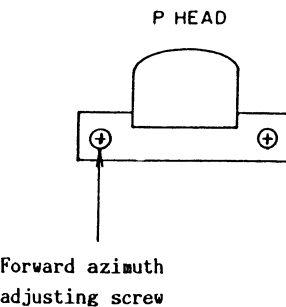
PRACTICAL SERVICE FIGURE

<RADIO SECTION>

Sensitivity :	H model
(IHF, THD 3%)	FM 18 ± 4 dB (at 100 MHz)
(S/N 10dB)	SW ₂ 23 ± 5 dB (at 14.0 MHz)
(S/N 10dB)	SW ₁ 38 ± 4 dB (at 4.0 MHz)
(S/N 10dB)	MW 44 ± 4 dB (at 1000 kHz)
	E, Z models
(IHF, THD 3%)	FM 18 ± 4 dB (at 100 MHz)
(S/N 10dB)	SW 28 ± 4 dB (at 10 MHz)
(S/N 10dB)	MW 44 ± 4 dB (at 1000 kHz)
(S/N 10dB)	LW 47 ± 4 dB (at 200 kHz)
Intermediate frequency :	FM 10.7 ± 0.05 MHz
	AM 468 ± 3 kHz
FM stereo separation :	FM 25 ± 5 dB

<TAPE RECORDER SECTION>

Record bias frequency :	61 kHz (DECK-2)
Erasing ratio :	58 ± 5 dB (DECK-2)
Distortion :	Less than 3% (PB) Less than 5% (REC/PB)
Signal noise ratio :	45 ± 5 dB / More than 45 dB (DC/AC, PB) 40 ± 5 dB / More than 37 dB (DC/AC, REC/PB)
Noise level :	20 ± 10 dB (AC, VOL. MAX., PB) 20 ± 5 dB (DC/VOL. MAX., PB)
Wow and Flutter :	Less than 0.35% (RMS) (DECK-1, 2)
Take up torque :	30 ~ 60 g-cm (DECK-1, 2)
F.F & rewind :	55 ~ 120 g-cm (DECK-1, 2)
Back tension :	2.0 ~ 5.0 g (DECK-1, 2)



1 Azimuth Adjustment
Settings: • Test tape: TTA-113B
• Adjustment location
: Azimuth adjusting screw

■ACCESSORIES/PACKAGE LIST

PART NO. CHANGED TO	REF. NO.	PART NO.	ORDER	DESCRIPTION	COMMON MODEL	Q, TY
1		★81-571-904-019	S	INSTRUCTION BOOKLET (H,U,C ONLY)	*	1
2		★81-571-905-019	S	INSTRUCTION BOOKLET (E,Z ONLY)	*	1
3		★87-034-750-019	S	AC CORD ASSY U (U,C ONLY)		1
4		★87-034-751-019	S	AC CORD (H) (H ONLY)		1
5		★87-034-755-010	J	AC CORDSET ASSY (E,Z ONLY)		1
6		★87-049-137-019	S	PLUG SIEMENS (H ONLY)		1